

Application No. 10/524,525  
Amendment Dated 12/26/07  
Reply to Office Action of 9/26/07

## **REMARKS**

This Amendment is submitted in response to the final Office Action mailed on September 26, 2007. Claim 47 has been amended, and claims 24-45 and 47-50 remain pending in the present application. In view of the foregoing amendments, as well as the following remarks, Applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration of the application in this regard.

In the present Office Action, the Examiner has maintained his prior rejections as set forth in the Office Action mailed on April 15, 2007. While Applicant respectfully traverses the rejection of claim 47 as being anticipated by Nakagawa et al., Applicant has amended this claim to more sharply define the claimed invention over the prior record and respectfully requests that the rejection be withdrawn. Applicant respectfully traverses the rejections of claim 24-45 and 49 as being unpatentable over Song et al. in view of Perry et al. for the reasons set forth below and respectfully requests that the rejections be withdrawn.

With respect to the rejection of independent claim 47, Applicant has amended this claim to incorporate the preamble into the body of the claim by reciting that the claimed aluminum alloy forms a mask material. Accordingly, Applicant submits that the recited “mask material” is entitled to patentable weight.

In contrast, the aluminum film of Nakagawa et al. is not a mask material that is used to form a mask during the etching of an underlying substrate as claimed by

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Applicant. Rather, according to the manufacturing method of Nakagawa et al., the underlying substrate is not etched at all but rather, it is the aluminum film that is etched to form the interconnection pattern (see Column 5, lines 46-50 and Column 8, lines 6-12). Consequently, Applicant submits that amended independent claim 47 defines over Nakagawa et al. taken alone, or in combination with the other prior art of record, and the rejection of independent claim 47 should be withdrawn.

With respect to the rejections of independent claims 24, 49 and 50 as being unpatentable over Song et al. in view of Perry et al., Applicant respectfully traverses the Examiner's position that the "10 cm" dimension described in Perry et al. on page 148 at the last line on the left column refers to a distance between the substrate and the plasma source as claimed by Applicant. In particular, the Examiner will note that Perry et al. describes a plasma uniformity "over 10 cm at the substrate holder." Applicants submit that the "10 cm" mentioned there is not "above" the substrate holder as asserted by the Examiner, but rather is *at* the substrate holder. Moreover, the Examiner is referred to the top paragraph on Page 148 of Perry et al. wherein it describes that when the chamber field was halved, the plasma density was halved, but the plasma uniformity extended over a **diameter** of 15 cm. In view of the above, Applicant respectfully submits that the "10 cm" dimension described in Perry et al. clearly refers to a widthwise or diameter dimension of a uniformity region and not to a distance measure of the plasma source relative to the substrate as claimed by

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Applicant in each of independent claims 24, 49 and 50. Consequently, Applicant submits that the rejection of these claims are improper and should be withdrawn.

Moreover, Perry et al. discloses a significant lower etch rate from 0.7 to 0.3  $\mu\text{m}/\text{min}$  (see left column at Page 149 and Figure 2(A)) than the etch rate of at least 2  $\mu\text{m}/\text{min}$  as recited in each of independent claims 24, 49 and 50. The etching process of Perry et al. is slow since it does not appear to use the Bosch process. Rather, the Abstract of Perry et al. describes the use of “pure SF<sub>6</sub>” whereas the Bosch process requires an alteration of SF<sub>6</sub> and a passivation gas. Accordingly, Applicant submits that Perry et al. taken alone, or in combination with the other prior art of record, fails to teach or suggest the combination of steps recited in each of independent claims 24, 49 and 50 and the rejections of these claims should be withdrawn.

Moreover, as claims 25-45 and 48 depend from allowable independent claims 24 and 47, respectively, and further as each of these claims recites a combination of steps or elements not taught or suggested by the prior art of record, Applicant submits that these claims are allowable as well.

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**Conclusion**

In view of the foregoing response including the amendments and remarks, this application is submitted to be in complete condition for allowance and early notice to this affect is earnestly solicited. If there is any issue that remains which may be resolved by telephone conference, Examiner is invited to contact the undersigned in order to resolve the same and expedite the allowance of this application.

Applicant does not believe that this response requires that any fees be submitted, however, if any fees are deemed necessary, these may be charged to Deposit Account No. 23-3000.

Respectfully submitted,

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